ORIGINAL

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)
	)
DSC COMMUNICATIONS CORPORATION	) RM No. 8837
	)
Petition for Amendment of the Commission's Rules for Allocation of Radio Spectrum in the 2 GHz Band for the Provision of Wireless Fixed Access Local Loop Services	)

PARTIAL OPPOSITION

ITS Corporation ("ITS"), by its attorneys and pursuant to Sections 1.4 and 1.405 of the Commission's Rules, hereby opposes in part the petition filed by DSC Communications Corporation ("DSC") that proposes the reallocation of various frequency bands between 1.3 GHz and 2.7 GHz for wireless fixed access-local loop service ("WFA-LL"). For the reasons set forth below, the Commission should reject those portions of DSC's petition that request reallocation of spectrum currently used by or adjacent to spectrum used by the Multipoint Distribution Service ("MDS") until such time as DSC demonstrates that such reallocation can be accomplished without causing harmful electrical interference to wireless cable operations.

The MDS, along with the Instructional Television Fixed Service ("ITFS"), is primarily utilized by wireless cable system operators to distribute a multichannel video

programming service and ancillary services to subscribers.[1/] ITS is one of the leading manufacturers of wireless cable transmission equipment, and thus has a strong interest in assuring that wireless cable operations thrive.

ITS is concerned that DSC's proposal fails to adequately protect the wireless cable industry's use of MDS facilities licensed in the 2150-2162 MHz band from harmful interference. Since the Commission has invested a great deal of regulatory capital to promote the success of wireless cable,[2/] it would be bizarre for the Commission to permit WFA-LL or any other new service offering to degrade wireless cable's already scarce spectrum allocation. Yet, adoption of DSC's proposal would have just that result. In ITS's view, the Commission should not seriously consider a reallocation of spectrum in or around

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[1/] *See, e.g. Request For Declaratory Ruling on the Use of Digital Modulation by Multipoint Distribution Service and Instructional Television Fixed Service Stations*, Declaratory Ruling and Order, FCC 96-304, at 2 n.3 (rel. July 10, 1996)[hereinafter cited as "*Digital Declaratory Ruling*"].

[2/] *See, e.g. Digital Declaratory Ruling; Amendment of Parts 21, 43, 74, 78, and 94 of the Commission's Rules Governing Use of the Frequencies in the 2.1 and 2.5 GHz Bands Affecting: Private Operational-Fixed Microwave Service, Multipoint Distribution Service, Multichannel Multipoint Distribution Service, Instructional Television Fixed Service, & Cable Television Relay Service,* 10 FCC Rcd 7074 (1995) *aff'd,* FCC 96-130 (released April 1, 1996); *Amendment of Parts 21 and 74 of the Commission's Rules With Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service and Implementation of Section 309(j) of the Communications Act -- Competitive Bidding,* 10 FCC Rcd 9589 (1995)[hereinafter cited as "*MDS Auction Order*"]; *on recon.*, 10 FCC Rcd 13821 (1995) *See also Implementation of Section 19 of the Cable Television Consumer Protection and Competition Act of 1992: Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming,* 9 FCC Rcd 7442, 7486 (1994).

the 2150-2162 MHz band unless and until DSC can provide the Commission with technical data which demonstrates that existing MDS uses will be fully protected from interference.

The potential adverse impact on the wireless cable community's use of the 2150-2162 MHz band should be obvious. DSC's Channel Plans B, C, D and E all propose to utilize frequencies in the 2150-2162 MHz band used by the MDS or adjacent to that band.[3/] While DSC concedes, as it must, that "where coexistence with other services is required, the appropriate technical rules will need to be modified to ensure adequate protections,"[4/] DSC provides no evidence that the requisite protection can be afforded to the MDS. In fact, there is no mention of the MDS whatsoever in DSC's petition, much less a plan for protecting the numerous MDS stations across the nation operating in the 2150-2162 MHz band from interference that could result from the introduction of DSC's CDMA-based WFA-LL service offering.

DSC's cavalier approach to protecting the wireless cable industry cannot be squared with the Commission's recent emphasis on assuring that MDS and ITFS facilities employed by the wireless cable industry be protected from harmful electrical interference. ITS was one

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[3/]When the Commission designated the 2160 MHz to 2162 MHz band for emerging technology use, it stated with crystalline clarity that existing MDS facilities in the 2156-2162 MHz band would retain their primary status and be entitled to interference protection. *Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies*, 8 FCC Rcd 6589, at n. 3 (1993). The importance of retaining MDS use of those channels was reinforced recently when the Commission refused to reallocate them for PCS use. *See Allocation of Spectrum Below 5 GHz Transferred from Federal Government Use*, 10 FCC Rcd 4769 (1995).

[4/]DSC Petition, at 36.

of the 99 entities that last summer submitted to the Commission a petition proposing interim policies for the introduction of digital technology employing Quadrature Amplitude Modulation ("QAM") and Vestigial Sideband ("VSB") modulation schemes.[5/] The premise of that petition was that since use of these modulation schemes is no more likely to cause interference to nearby facilities than the use of analog modulation, the Commission could authorize digital operations in the MDS and ITFS so long as the current MDS and ITFS interference protection requirements are met.[6/] That petition was accompanied by detailed technical data derived from tests of potential cochannel and adjacent channel interference from digital transmissions using 8-VSB and 64-QAM densities to analog wireless cable operations. These tests demonstrated beyond question that such modulation densities could be employed without causing any additional interference.

The Commission's resulting *Declaratory Ruling and Order* establishes policies to govern the transition of MDS stations to new technologies, and sets forth an approach to interference protection that should govern here. Based on the detailed technical data

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[5/] *See* Petition for Declaratory Ruling, DA 95-1854 (filed July 13, 1995).

[6/] Those requirements, set forth at Sections 21.902 and 74.903 of the Commission's Rules, generally require that an applicant for a new station or a major modification of an existing station demonstrate that as a result of the proposed facility the desired-to-undesired signal ratio will not exceed 45 dB cochannel or 0 dB adjacent channel at any location within the protected service area of nearby MDS and ITFS stations. The Commission has recently adopted a somewhat different approach for protecting those relatively few new MDS stations authorized following the MDS auctions, requiring that they be protected to a power flux density of -73 dBw/m^2 at the boundary of their protected service areas. *See MDS Auction Order,* 10 FCC Rcd at 9617.

submitted to the Commission, the Commission found that it could permit an applicant to employ up to 8-VSB or 64-QAM if the applicant demonstrated that the proposed facility would not result in the desired-to-undesired ("D/U") signal ratio falling below 45 dB cochannel or 0 dB adjacent channel at any point within the 3848 square mile protected service area of nearby stations. Because of the lack of definitive test data, however, the Commission refused to adopt interim policies governing higher densities on QAM and VSB or other modulation techniques. Rather, the Commission made clear that the burden is on the proponent of any new technology to demonstrate that it will provide interference protection equivalent to that afforded under the current rules.[7/]

DSC has most certainly failed to carry this burden. In fact, while DSC proposes minimalistic cochannel and adjacent channel interference protection standards,[8/] it has presented the Commission with no test data at all to demonstrate that application of those standards will result in interference protection for MDS stations equivalent to that afforded under the current 45 dB cochannel and 0 dB adjacent channel D/U ratios.

ITS suspects that it will be impossible for DSC to make the necessary demonstration, for its proposed technical rules are inadequate. Most troubling, DSC is proposing no restriction on the effective radiated power at which WFA-LL systems can operate (other than

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[7/] *See Digital Declaratory Ruling*, at ¶¶ 12, 14-1, 45-46.

[8/] *See* DSC Petition, at 36-37.

at the boundary of the WFA-LL service area),[9/] and has advocated an extremely loose spectral mask.[10/] Obviously, this combination of unlimited power and extensive out-of-band emissions is a prescription for disaster to those MDS licensees forced to operate using frequencies adjacent to those used by WFA-LL. Although testing is necessary to determine precisely what power and spectral mask limitations on WFA-LL would be necessary to assure MDS licensees protection from CDMA-based WFA-LL equivalent to that they receive from adjacent channel analog, 8-VSB and 64-QAM systems, logic dictates that more stringent limitations than proposed by DSC are essential.

In conclusion, DSC has failed to carry its burden of demonstrating that WFA-LL Channel Plans B, C, D or E can be implemented in a manner that will fully protect the wireless cable industry from harmful electrical interference. If the Commission is disposed towards moving forward with a spectrum allocation in response to DSC, it should limit that

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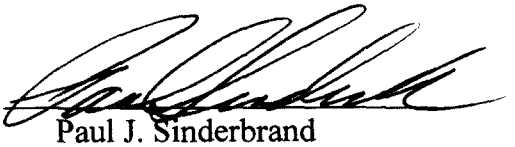
[9/] *See id.* at 35. Although DSC proposes that the predicted and measured median field strength of a WFA-LL system should be limited to 47 dBuV/m at the boundary of its service area, that limitation will provide little solace to wireless cable system operators subjected to unlimited power levels in areas away from the border of the WFA-LL service area.

[10/] *See* DSC Petition, at 36-37. DSC's proposed mask of 45 dB down at $f_0 \pm$ (2.5 X channel bandwidth) is far less rigorous than even the less restrictive mask adopted for MDS and ITFS licensees operating using digital modulation. *See Digital Declaratory Ruling*, at ¶ 25.

allocation to frequencies that are not adjacent to the MDS and ITFS allocations unless and until DSC can provide test data establishing that WFA-LL can be implemented while still affording MDS licensees protection equivalent to that they receive today.

Respectfully submitted,

ITS CORPORATION

By: 
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August 12, 1996

CERTIFICATE OF SERVICE

I, Paul J. Sinderbrand, hereby certify that the foregoing Partial Opposition was served this 12th day of August, 1996 by depositing a true copy thereof with the United States Postal Service, first class postage prepaid, addressed as follows:

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